

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (currently amended): An information reproduction apparatus comprising:

a reading device which reads image information recorded in an information storage medium;

a decoding device which decodes the image information read by the reading device;

a storage device which holds the decoded image information decoded by the decoding device so that the decoded image information can be read therefrom and written therein repeatedly;

an output controlling device which sequentially reads out and outputs the decoded image information in order of precedence at the time of writing the decoded image information while writing the decoded image information in a predetermined region of the storage device;

a designating device which designates a repetitive reproduction start position indicating a start position of repetitive reproduction;

a repetitive reproduction controlling device which controls a repetitive reproduction processing;

a repetitive start instructing device which instructs the repetitive reproduction controlling device to begin to perform the repetitive reproduction processing; and

a repetition reproduction range setting device which sets a repetition reproduction range that would include the decoded image information to be reproduced at one repetition reproduction and instructs the output controlling device to maintain the decoded image information in the repetition reproduction range, when the repetitive reproduction start position is designated by the designating device,

wherein the repetitive reproduction controlling device instructs the output controlling device to output the decoded image information in the repetition reproduction range and to acquire the decoded image information subsequent to the repetition reproduction range, when the repetitive reproduction controlling device is instructed to begin to perform the repetitive reproduction processing by the repetitive reproduction start instructing device,

wherein the output controlling device maintains the decoded image information in the repetition reproduction range in the storage device even when the decoded image information in the repetition reproduction range has been outputted.

Claim 2. (previously presented): The information reproduction apparatus according to claim 1, wherein:

the repetition reproduction range setting device sets a range from a target position on the storage device, from which the decoded image information is read at the time when the start position is designated, as the repetition reproduction range, and instructs the output controlling device to use an area except the repetition reproduction range for reading and writing

area of the decoded image information, when the repetitive reproduction start position is designated, and

the repetitive reproduction controlling device instructs the output controlling device to begin to read out the decoded image information from the target position on the storage device to an end of the repetition reproduction range when the repetitive reproduction controlling device is instructed to begin to perform the repetitive reproduction, and instructs the reading device to read the decoded image information, the decoding device to decode the read image information, and the output controlling device to write the decoded image information in the area except the repetition reproduction range, when the output controlling device is instructed to acquire the decoded image information subsequent to the repetition reproduction range.

Claim 3. (previously presented): The information reproduction apparatus according to claim 1, wherein the repetitive reproduction range setting device sets the size of the repetition reproduction range so that both reading information corresponding to the decoded image information subsequent to the repetition reproduction range in the reading device and decoding the read image information in the decoding device can be completed while the decoded image information in the repetition reproduction range is outputted.

Claim 4. (previously presented): The information reproduction apparatus according to claim 1, wherein:

the image information recorded on the information storage medium is video compression information that includes first image information for intra-frame encoding and second image information for performing forward and backward prediction; and

the repetition reproduction range setting device instructs the output controlling device to maintain both the decoded image information that corresponds to one processing unit of the video compression information and the decoded image information that corresponds to the second image information immediately before the first image information that is first appeared in a processing unit subsequent to the one processing unit, as decoded image information in the repetition reproduction range.

Claim 5. (currently amended): An information reproduction method comprising the processes of:

reading image information recorded in an information storage medium;

decoding the read image information;

holding decoded image information in a storage device so that the decoded image information can be read therefrom and written therein repeatedly;

sequentially reading out and outputting the image information in order of precedence at the time of writing the decoded image information while writing the decoded image information in a predetermined region of the storage device;

designating a repetitive reproduction start position;

setting a repetition reproduction range that would include the decoded image information to be reproduced at one repetition reproduction when the start position of repetitive reproduction is designated;

maintaining the decoded image information in the repetition reproduction range when the start position of repetitive reproduction is designated;

providing an instruction to begin to perform repetitive reproduction;

outputting the decoded image information in the repetition reproduction range when the instruction is provided; and

acquiring the decoded image information subsequent to the repetition reproduction range when the instruction is provided;

wherein the decoded image information in the repetition reproduction range is maintained in the storage device even when the decoded image information in the repetition reproduction range has been outputted.

Claim 6. (previously presented): The information reproduction method according to claim 5, wherein the method further comprising the process of using an area except the repetition reproduction range for reading and writing area of the decoded image information when the repetitive reproduction start position is designated, and

the process of setting the repetition reproduction range sets a range from a target position on the storage device, from which the decoded image information is read at the time

when the start position is designated, as the repetition reproduction range, when the repetitive reproduction start position is designated,

the process of outputting the decoded image information in the repetition reproduction range begins to read out the decoded image information from the target position on the storage device to an end of the repetition reproduction range, when the instruction is provided,

the process of acquiring the decoded image information subsequent to the repetition reproduction range includes the processes of: reading the image information; decoding the read image information; and writing the decoded image information in the area except the repetition reproduction range.

Claim 7. (previously presented): The information reproduction method according to claim 5, wherein the process of setting the repetition reproduction range sets the size of the repetition reproduction range so that both reading image information corresponding to the decoded image information subsequent to the repetition reproduction range and decoding the read image information can be completed while the decoded image information in the repetition reproduction range is outputted.

Claim 8. (previously presented): The information reproduction method according to claim 5, wherein

the image information recorded on the information storage medium is video compression information that includes first image information for intra-frame encoding and second image information for performing forward and backward prediction, and

the method further comprising the process of maintaining both the decoded image information that corresponds to one processing unit of the video compression information and the decoded image information that corresponds to the second image information immediately before the first image information that is first appeared in a processing unit subsequent to the one processing unit, as the decoded image information in the repetition reproduction range, when the repetition reproduction range is set.

Claim 9. (previously presented): The information reproduction apparatus according to claim 4, wherein the video compression information is information in accordance with an MPEG2 (Moving Picture Expert Group 2) system.

Claim 10. (previously presented): The information reproduction apparatus according to claim 1, wherein the image information is image compression information.

Claim 11. (previously presented): The information reproduction apparatus according to claim 1, wherein:

the image information recorded in the information storage medium is video compression information that includes first image information for intra-frame encoding; and

the repetition reproduction range setting device instructs the output controlling device to maintain the decoded image information whose range is set in a range that includes up to a last data of one processing unit of the video compression information as decoded image information in the repetition reproduction range.

Claim 12. (previously presented): The information reproduction apparatus according to claim 11, wherein the video compression information is information in accordance with an MPEG2 (Moving Picture Expert Group 2) system.

Claim 13. (previously presented): The information reproduction method according to claim 8, wherein the video compression information is information in accordance with an MPEG2 (Moving Picture Expert Group 2) system.

Claim 14. (previously presented): The information reproduction method according to claim 5, wherein the image information is image compression information.

Claim 15. (previously presented): The information reproduction method according to claim 5, wherein:

the image information recorded in the information storage medium is video compression information that includes first image information for intra-frame encoding; and

the repetition reproduction range setting device instructs the output controlling device to maintain the decoded image information whose range is set in a range that includes up to a last data of one processing unit of the video compression information as decoded image information in the repetition reproduction range.

Claim 16. (previously presented): The information reproduction method according to claim 15, wherein the video compression information is information in accordance with an MPEG2 (Moving Picture Expert Group 2) system.

Claim 17. (currently amended): An information reproduction apparatus comprising:
a reading circuit that reads image information recorded in an information storage medium; and
a control circuit,
wherein said control circuit:

designates a repetitive reproduction start position indicating a start position of repetitive reproduction for a decoded image information that is written in a predetermined region of the storage device,

controls a repetitive reproduction processing,
performs the repetitive reproduction processing,
sets a repetition reproduction range that would include the decoded image information to be reproduced at one repetition reproduction,

maintains the decoded image information in the repetition reproduction range,
when the repetitive reproduction start position is designated, and

outputs the decoded image information in the repetition reproduction range and
acquires the decoded image information subsequent to the repetition reproduction range, when
said control circuit begins to perform the repetitive reproduction processing,;

wherein the control circuit maintains the decoded image information in the repetition
reproduction range in the storage device even when the decoded image information in the
repetition reproduction range has been outputted.

Claim 18. (currently amended): An information reproduction method comprising:

designating a repetitive reproduction start position for a decoded image
information that is written in a predetermined region of a storage device;

setting a repetition reproduction range that would include the decoded image
information to be reproduced at one repetition reproduction when the start position of repetitive
reproduction is designated;

maintaining the decoded image information in the repetition reproduction range
when the start position of repetitive reproduction is designated;

providing an instruction to begin to perform repetitive reproduction;

outputting the decoded image information in the repetition reproduction range
when the instruction is provided; and

acquiring the decoded image information subsequent to the repetition reproduction range when the instruction is provided,

wherein the decoded image information in the repetition reproduction range is maintained in the storage device even if once the decoded image information in the repetition reproduction range has been outputted.